well as internal, the patient is really disinfected from the onset of his malady, and the benefits are manifest alike upon himself and upon those subject to the contagion."—*British Med. Journ.*, Nov. 25, 1871.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

41. *Transfusion.*—Dr. de Belina, of Heidelberg, ascribes, very justly, the failure of transfusion of blood, and the discredit into which it has fallen in France, mainly to the employment of blood which has not been defibrinated, to not determining the quantity of blood to be employed, and finally to the imperfection of the instruments and of the operative methods employed.

The use of blood, not defibrinated, inevitably results in its coagulation in the tubes of the instrument, hence the transfusion becomes impossible, or clots may be introduced into the vein, producing a dangerous or even fatal result. If the clots be large, obstruction of the pulmonary artery and immediate death may result, and if death be not immediate, it may result from an embolus produced by the deposit of clots in some portion of the circulatory apparatus.

Fibrin is not an essential part of the blood and it may be removed without inconvenience; and, further, the process by which the blood is defibrinated improves it by saturating it with oxygen and by removing the carbonic acid.

As to the quantity, either too much is often employed or too much at a time, whence results afflux to the heart, consecutive paralysis, or at least dangerous congestions in different organs.

A proper apparatus for transfusion should fulfil the following conditions:—

1st. It should be capable of being kept perfectly clean.

2d. It should have sufficient capacity to contain the required amount of blood, and it should be easily used.

3d. The blood in it should be maintained of the desired temperature.

4th. The introduction of bubbles of air into the vein should be impossible.—*Revue de Thérap.*, Oct. 15, 1871, from *Receuil de Méd. Vet.*

42. *Arterial Transfusion of Blood.*—Professor Hueter recorded some time ago a case of poisoning with carbonic oxide, in which he preserved the life of the patient by transfusion. More recently, in the *Centralblatt*, he has recommended the same, on the ground of the successful issue of three cases where healthy blood was injected to remove the symptoms accompanying intense septicæmia. Hueter pursued in these cases not the usual plan of injecting venous blood into a vein, but that of injecting the venous blood of a healthy man into the *artery* of the invalid. He performs the operation in the following way. During the defibrination of the blood by beating and filtration through a piece of fine muslin by assistants, he exposes the radial artery or the tibialis posticus, above the malleolus internus, the latter being just as easy to find as the former. Any slight hemorrhage is carefully arrested, and a very small opening is made in the sheath of the artery, which is separated from the adventitia; a sound is then pushed under the artery, and moved hither and thither, till about two and a half centimetres of the artery are isolated. Four pieces of strong silk are now passed beneath the vessel, of which one forms a reserve ligature. The silk nearest to the heart is now tied tightly, so as to prevent all entrance into the vessel of blood coming from the heart. The injection syringe is now filled, and the lowermost silk slightly pulled, so as to stretch the vessel. An opening is now made in its upper part, by cutting it about half through transversely with scissors. The canula is introduced, and secured by the third thread. The tension hitherto kept up on the lowermost silk is now relaxed, and the injection begun to be forced in. When the injection is completed, the lowermost thread is tightened, and the piece of artery between the two ligatures excised. The wound is simply dressed. The principal difficulties of the operation are its

complexity, and the necessity that exists of maintaining a considerable pressure on the piston to overcome the cardiac pressure. On the latter ground Hueter recommends the employment of Mosler's injection-syringe, in which the piston works with a screw. In Hueter's opinion, the objections are far outweighed by the advantages which arterial transfusion affords. One of these advantages is, that the blood reaches the heart more slowly, and with greater steadiness and regularity, than by venous transfusion. He regards the injection of small quantities (two, three, or four ounces) as useless, in most instances from eight ounces to one pound being requisite. But if so large a quantity be suddenly thrown upon the heart, as occurs in injection by the veins, a fatal arrest of its activity may occur. It must be remembered, also, that in consequence of the bleeding prior to the injection, as much unhealthy blood is removed as good is introduced from the system. Another advantage attendant on the arterial injection is security against the introduction of air, any small quantities that may be introduced being rapidly absorbed during the passage of the blood through the capillaries. By this method, also, all danger of phlebitis is avoided, which in many instances, when transfusion of the veins would otherwise have proved successful, has led to the death of the patient. It has not yet been ascertained whether the contact of a large quantity of blood, rendered arterial by whipping with the waste of the right heart, is of any real advantage. In the mode of transfusion by the arteries, the blood necessarily becomes venous during its passage through the capillaries. In conclusion, Mr. Hueter observes that transfusion, whether performed through the veins or arteries, constitutes a weapon against disease which can in no other way be contested, and points out the excellent results we may anticipate from its employment.—*The Practitioner*, Nov. 1871, from *Aerztliches Literaturblatt*, No. 6, 1871.

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43. *Lesions in Remote Organs from Injuries and Diseases of Brain.*—In a series of experiments by Brown-Séquard recently made public, it is shown that by crushing or incising the pons Varolii, there took place on the side of the body opposite to that side of the pons on which the injury was inflicted, ecchymosis of the pleura or pulmonary apoplexy. Dr. Fleischmann has ascertained that precisely the same thing occurs also in pathological lesions of the brain. Thus, when, upon post-mortem examination, he has met with a tubercular deposit in the cerebrum, the tubercula quadrigemina, the optic thalamus, or the pons, there was a coincident hemorrhagic condition of the pleura, pericardium, and surface of the kidneys, and in one case clusters of emphysematous points in both lungs. It is especially worthy of note that in one case in which the tubercular deposit was confined chiefly to the right side of the pons, the pleura covering the left lung was beset with numerous hemorrhagic points, in size from that of a pin's head to a lint seed. How far the facts related are to be explained by a sympathetic action, Dr. F. considers to be, in the present state of our knowledge, at least, uncertain.—*Centralblatt f. d. Med. Wissenschaften*, 1871, No. 28, from *Jahrbuch f. Kinderheilk.*, IV. 1871.

D. F. C.

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44. *Physiology and Pathology of the Knee-Joint.*—R. Delitsch remarks (*Archiv. d. Heilkunde*, XI. 1870) that Bonnet's experiments made by forcibly injecting a fluid into the cavity of a joint, showed that when such injection is made, no matter in whatever position the joint may be, it will always assume one and the same angle, and one in which the dimensions of the articular cavity are developed to their largest extent, and this position, especially in reference to the knee-joint, is a half flexed one. Let this position be changed, after the injection into the articular cavity of the knee-joint is made, a portion of the injection escapes, or is forced, by the tearing of the capsular membrane, or through the perforation made in the latter, into the blind sac above the patella, so as to become diffused between the femur and quadriceps muscle. Bonnet explains the cause of the flexion of the knee produced by the injection into its cavity, by the interposition of the injected fluid between the articular surfaces of the three bones composing the joint: separating the surface of the femur from that of the tibia one to three mm., and that of the femur from that of the patella about one-third of an inch. Dr. D. repeated the experiments of Bonnet

with every possible variation of which they were capable, in order to determine the relationships in cubic centimetres between the degree of capacity of the synovial cavity and the amount of flexion of the joint. The following are the results of those experiments: 1. The knee-joint exhibits with degrees of flexion, in different individuals, a very great difference in the extent of synovial space, especially according as the communication between the synovial cavity and one or other of the muciferous bursæ is free or interrupted. The muciferous bursæ referred to, lie, one between the tendon of the quadriceps muscle and the uppermost portion of the upper edge or the fold of the synovial capsule; another between the gastrocnemius internus, the semi-membranosus muscles, and the articular capsule, and often a third occurs above the first named one. 2. The extent of the synovial space reaches its maximum at a particular grade of flexion of the joint, having a medium angle of between 20° and 30°. In opposition to the statement of Bonnet, Dr. D. finds that the largest extent of synovial space is not attained by a half-flexed position, but exists at the commencement of flexure. 3. The maximum of flexure gives the minimum extent of synovial space. Hence in the treatment of penetrating wounds of the knee-joint, contrary to the directions of Bonnet, the extended position of the limb is not that which is adapted to diminish the size of the capsular cavity. All the pathological conditions, like acute articular dropsy of the knee, have part in the conditions exposed by the above experiments. It is usual for patients to assume and maintain the flexed position of the articulation whenever pain is experienced from an affection of the joint, but not to avoid the pressure upon the articulating surfaces of the bones, as Bonnet supposes; on the contrary, as Dr. D. has shown, there is coincident disease of the lateral ligaments, and as when they are put upon the stretch they cause pain, the flexed position of the limb is the one in which the pain from the diseased ligaments is the least. It is, consequently, that into which the patient, almost instinctively, places the limb.

In regard to the management of dropsy of the knee-joint, it is recommended by Goyrand to open, by a subcutaneous incision, the articular capsule, and by subsequent compression of the entire circumference of the knee-joint to get rid of the water effused into the surrounding cellular tissue, from which plan he has obtained, he reports, the best results. Bonnet had already pursued the plan of compression without resorting to a previous opening into the cavity of the joint. Dr. D. favours the plan of Goyrand. The opening into the synovial cavity can be accomplished without causing hemorrhage, provided the joint is fully flexed, so as to reduce the extent of its cavity to its minimum.—*Centralblatt f. d. Med. Wissenschaften*, 1870, No. 50. D. F. C.

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45. *Treatment of Serous Collections by Injections of Alcohol.*—M. MONOD read an interesting paper on this subject before the Surgical Society of Paris, Oct. 4, 1871. He uses the alcohol at 40°, in very small quantity, about one gramme, either pure or mixed with an equal quantity of water. M. M. commences by puncturing the tumour and then withdrawing about a spoonful of its contents; he then injects the alcohol. This operation may be repeated once or twice, if necessary, at variable intervals.

M. M. has thus successfully treated a serous cyst of the neck, simulating goitre, and three cases of hydrocele. In three cases of hydrocele the injection of this small quantity of alcohol caused the absorption of the serous collection and a complete cure without exciting inflammation of the tunica vaginalis, and without it being necessary for the patient to remain in bed.

M. M. thinks that this method of treatment may be advantageously resorted to in hydrarthroses, ovarian cysts, hydrorachis, hydrocephalus, and in general in all serous collections.—*L'Union Médicale*, Oct. 31, 1871.

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46. *Amputation through the Condyles of the Femur, by Long Anterior and Short Posterior Flaps; Retention of the Patella and Removal of its Cartilaginous Surface; Division of the Rectus Tendon; Tubular Presse-artère applied to the Popliteal Artery; Torsion of the smaller Vessels; Antiseptic Treatment of the Stump; Recovery.*—Mr. B. WILLS RICHARDSON reports (*Dublin Quart.*

Journ. Med. Sci., Nov. 1871) the following interesting case of this. The subject of it was a girl, æt. 12, admitted into Adelaide Hospital, under his care, October 19th, 1870. The preceding May she had been attacked "by severe pain at the inside of the left ankle, and shortly afterwards an abscess formed and opened a little above the internal malleolus, whence there was a constant discharge of matter. Other openings subsequently made their appearance between it and the knee, the highest one being close to that joint. The chief discharge escaped through the opening at the malleolus.

"With the exception of poulticing, she had no treatment until her admission to hospital. The left leg was then semiflexed upon the thigh, and the knee immobile from false anchylosis. Between the knee and the malleoli there were seven openings in the skin, communicating with cloacæ situated in the front and internal part of the tibia. The ankle-joint was much enlarged, and, when moved, was the seat of excruciating pain. Loose bone could be felt at the bottom of each of the three upper cloacæ. A probe could be passed directly into the ankle-joint through the lowest opening.

"Percussion elicited slight dulness under the left clavicle, and was attributed by my colleague, Dr. Little, to alteration in the shape of the thorax and direction of the spine, caused by the peculiar position in which she had lain since the commencement of her illness. There was no evidence of renal disease. The pulse averaged 112. Ordered an extra diet with wine, cod-liver oil, and syrup of iodide of iron.

"The propriety of an immediate tentative operation for the removal of the loose bone was discussed by myself and colleagues, but, as she was much worn and debilitated, we concluded that it would be better, from the presence of the acute disease of the ankle-joint, to amputate rather than perform a partial operation. Very slight improvement ensued upon the medicinal and dietetic treatment prescribed, and the ankle-joint pain was agonizing, although narcotics were freely given hypodermically and by the mouth.

"Eventually I amputated at the knee, on 14th December, 1870, by long anterior and short posterior flaps. The anterior flap was formed of the skin of the front and sides of the knee and leg to a couple of inches below the tuberosity of the tibia. It was cut of a semilunar shape inferiorly, and was given sufficient width to cover the face of the stump. After the opening of the joint and division of the ligaments, the short posterior flap was made by cutting downwards and backwards. About an inch of the condyles was removed with the saw. The patella was next grasped with the lion forceps, and its articular surface sawn off with Butcher's saw, the blade of the saw having been previously fixed with its sides horizontal in the frame. The rectus tendon was cut across just above the patella, for the reason I have given in the prefatory observations. My tubular *presse-artère* was applied to the popliteal artery, and three or four smaller vessels were twisted. As soon as the flaps were washed with a solution of carbolic acid, creasote, glycerine, and water, they were brought together and retained in position with twisted sutures. Finally the stump was covered with a thick layer of carbolic acid cream, and she was given a hypnotic dose of solution of muriate of morphia. Extra diet; Liebig's essence of meat; wine, six ounces. The pulse rose in the evening to 120, and she was very restless. The morphia draught having been vomited, she had hypodermically $\frac{1}{6}$ gr. acetate of morphia, and $\frac{1}{120}$ gr. sulphate of atropia.

"15th Dec. Slept several hours after the hypodermic injection; pulse 145; tongue natural; appetite good; stump covered with another layer of carbolic acid cream. To take three times daily two tablespoonfuls of a mixture composed of infusion and tincture of cinchona, with tincture of veratrum viride.

"16th Dec. Pulse 135. The hypodermic injection was repeated, and caused sound sleep. Stump syringed with a carbolic acid and creasote lotion, and then covered with a layer of carbolic acid cream.

"17th Dec. Pulse 132; tongue natural. She had a good night with the assistance of the hypodermic injection. Stump managed in the same way; ordered a purgative; chicken added to her diet.

"18th Dec. Pulse 120; tongue natural; slept well; no suppuration from the stump, which was managed in the same way. Wine reduced to eight ounces, and the cinchona mixture, with tincture of veratrum viride, was continued.

"19th Dec. Pulse 120; tongue natural. At noon I removed the *presse-artère* from the popliteal artery, being the 121st hour since its application. Not a drop of blood escaped. Some dilute sulphuric acid was added to the cinchona mixture, to check the purgative influence of the veratrum viride. Stump managed in same manner.

"28th Dec. Pulse 90. Same management of the stump, excepting that a couple of adhesive-plaster straps were used to assist in maintaining the patella in contact with the femur.

"5th Jan. 1871. Stump nearly healed, and syringe discontinued. Up to this date no suppuration had taken place beneath the flaps, but matter came from the granulations uniting their margins, to which the carbolic dressing was incessantly applied, showing that here, at least, it was powerless to prevent suppuration. The patella felt firmly consolidated with the femur.

"26th Jan. Upon crutches daily since the 23d January. The patella was immovable.

"I saw the girl in July, 1871. The stump was painless, bore pressure well, and the patella was immovably fixed in its new position. The cicatrix was well above and behind the end of the bone.

"It will be seen by the following description of the diseased tibia that amputation was the most likely step to afford satisfactory results in this case:—

"The bone is diseased from two or three lines beneath the upper epiphysary junction to the malleoli. There is an imperfectly formed bony case, the surface of which resembles sponge in appearance, and is roughly tuberculated. Excepting anteriorly and internally it is deficient below. It is perforated by twenty-six openings, the greater number of which are situated along its anterior and internal surface. They are very irregular in shape, one being long and oval. These openings lead down to the old shaft, which has thrown off several loose, thin exfoliations, and one tolerably long and slender piece that might be called a sequestrum. The remainder and greater portion of the shaft from condyles to malleoli is porous, spongy, and rough, and is consolidated behind for its whole length with new bony deposit. It, also, is perforated or rather riddled below with openings, two of which directly communicated with the ankle-joint, the lower epiphysis having been detached during life. The largest of these openings allows the tip of the forefinger to enter it, and matter passed freely through both from the diseased bone to the joint.

"The superior articular surfaces of the astragalus are completely deprived of cartilage, and when recent the bone itself was abnormally vascular."

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47. *Treatment of Stump after Amputation.*—F. BARTSCHER remarks that as early as the year 1856 (*Deutsche Klinik*, No. 51) he had recommended the abandoning of the bandage usually applied to the cut end of the stump. Since then, in the same periodical (1871, Nos. 27, 29), he presents a new series of cases which were treated upon the same plan. As to the mode of operating, M. B. had at first preferred to every other that by the circular incision. As the retraction of the flap in such operations is very considerable, he has adopted Burrow's plan of securing it over the cut surface of the stump by the interrupted suture. In his recent series of cases the amputation was by the formation of a forward flap. After the operation is fully completed, omitting every form of bandage, the end of the stump is simply to be enveloped by a compress soaked in water, which is to changed twice every day. By this means the surface of the stump is preserved scrupulously clean, and the formation of crusts by the drying of the pus when it forms, prevented. According to M. B., the chief recommendation of this mode of dressing is the very small amount of mortality which is reported to have occurred during its use. Of four amputations of the thigh, seven of the leg, one of the humerus, and one of the forearm, part of which were performed under the most unfavourable circumstances, only *two* terminated fatally. Both these deaths took place after amputations of the leg. In one of these cases the patient, an aged female, laboured under gangrene from emboli of the bloodvessels of the leg. The second case was that of an un-

healthy man with complicated fracture, which was already pyæmic, as, also, quickly became the wound produced by the operation. D. F. C.

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48. *Excision of Scapula for Encephaloid Disease.*—Mr. CHARLES STEELE, Surgeon to Bristol Infirmary, records (*British Med. Journ.*, Oct. 14th, 1871) a case of this in a boy admitted into the Bristol Infirmary. The tumour occupied the whole surface of the scapula, and its increase was rapid. The patient improved greatly after the operation, and the wound proceeded favourably, and there was a prospect of the patient being restored to health, when, seven weeks after operation, two small firm nodules were perceptible, one near the centre of the wound, the other towards the axilla. Mr. S. excised these, and the patient again improved, but the disease returned, and the patient died about five months after admission to the infirmary.

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49. *Operation of Opening the Larynx by Section of the Cartilages, etc., in order to facilitate the Removal of Morbid Growths.*—Mr. A. A. DURHAM, in a paper read before the Royal Med. and Chirurg. Soc. (Nov. 14, 1871), relates in detail five cases in which this operation had been performed in Guy's Hospital: in three cases by himself, in one by Mr. Bryant, and in one by Mr. Davies-Colley. The results in four of these cases had been eminently satisfactory, free respiration and good voice having been regained. The remaining case was still under treatment. Appended to the communication were more or less complete reports of all the cases which the author had been able to find on record. These cases were thirty-two in number, and, with the five detailed in his communication, gave a total of thirty-seven. In nineteen of these, the operation might be regarded as having been completely successful, natural respiration and voice (though in some instances not normal in tone) having been restored. In seven, partial success was obtained, respiration having been restored, but the voice lost or very seriously impaired. In four cases, some temporary relief was obtained. In three, the result might be considered negative, neither good nor harm having been done. The reports of at least two were incomplete. In two cases only, death resulted. In each of these, however, the immediate cause was blood-poisoning. Metastatic abscesses were found in the lungs in one case; in the other, erysipelas and gangrene occurred, and broncho-pneumonia and exhaustive fever ensued, and led to the fatal issue. Comparing the results thus stated with those given by Dr. Mackenzie in his treatise on Growths in the Larynx, the author pointed out that death could properly be attributed to the operation in two only out of the nine cases enumerated by Mackenzie as having terminated fatally, these two being the same as those already alluded to. With regard to the other seven cases, the author specified each, and showed that in each the result of the operation was favourable, or, at any rate, in no degree mischievous, and certainly not fatal. Some of the difficulties liable to be encountered in the operation were then briefly discussed, and the opinion was expressed that such difficulties were really fewer and more easily overcome than appeared to be generally supposed. In conclusion, the author pointed out that it was not necessary to institute any comparison between the dangers and difficulties of this operation and those met with in the removal of growths through the mouth by the aid of the laryngoscope; nor, indeed, was it at all fair to estimate the comparative merits of the two methods of proceeding by bare numerical statements of the results obtained. If, in any case, removal of the growth by aid of the laryngoscope should appear practicable, the idea of resorting to section of the cartilages could not be entertained until fair trial had been made of the minor operation. In very few, if any, of the cases on record in which the larynx was opened, would it have been practicable to remove the growths through the mouth. Indeed, in many instances, numerous abortive attempts through the mouth were made before resort was had to section of the cartilages. With regard to the chances of recurrence, there could be no doubt that the more completely the original growth was removed, the less would be the probability of its reappearance. Neither could there be any doubt that such complete extirpation could be more certainly effected in most cases after section of the cartilages than by any method practised through the mouth. Dr.

Mackenzie's conclusions as to the comparative chances of recurrence, as affected by the method adopted, appeared to the author unfair and likely to mislead. Cases of cancer (a malady very likely to recur) were included in one, and excluded from the other, of the sets of cases between the results of which a numerical comparison was made.—*British Med. Journ.*, Nov. 25, 1871.

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50. *Aspiration of Gas and Fluid in Strangulated Hernia.*—M. DUPLOUY, Prof. of Clinical Surgery at Rochefort (*Lancet*, Oct. 14, 1871, from *Gaz. Hebd.* February 6, 1871), having been consulted in a case of strangulated hernia of three days' standing, in a man of eighty-two, had recourse to the above-mentioned operation. Herniotomy was not thought advisable on account of the patient's age, and the needle and aspirating syringe were used. Only gas was at first evacuated, and by continuing the play of the piston, fluid tinged with fecal matter was obtained. The bowel thereupon became flaccid, and was easily returned. The case did well, and it is supposed that, the puncture being very fine, the fibres closed the minute aperture by lying against each other, fatal effusion being thus prevented.

Evacuation of gas by puncturing has been in vogue of late with French surgeons in cases of tympanites, the result being in some instances favourable. Dr. Rahn (*Montpellier Méd.*, June, 1871) succeeded in a case of strangulated hernia by injecting in the vicinity of the tumour the twenty-fifth part of a grain of sulphate of atropia.

We may add that, in 1865, M. Tartarin published several cases in the *Bulletin de Thérap.*, in which he succeeded in reducing strangulated hernia without kelotomy, by the use of the following liniment: Glycerine and croton oil, of each 45 minims. With this compound three frictions were made on the tumour, the first at 2 o'clock, the second at 3, and the third at 4. Before the last two frictions the skin was washed with soap and tepid water, and the spot carefully dried with a piece of fine linen. At 5, a copious stool was obtained, and the contents of the hernia were easily reduced. The case did well.

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51. *Puncture in Tympanites.*—M. PIORRY has communicated to the Academy of Medicine an elaborate memoir on puncture in gastro-intestinal pneumatoses, and gave (meeting of Nov. 14) the following as his conclusions:—

Puncture of the abdomen performed for the evacuation of gas contained in the stomach and intestines is very dangerous.

It should never be resorted to until after having determined as fully as possible the anatomical and physiological causes of the accumulation of the gas in the intestinal tube, and until after exhausting all other means of relief.

It would be desirable before recognizing this operation in surgical practice, to institute new experiments to discover some means by which the fluids and gases may be prevented from penetrating in the peritoneum, and to decide the precise spot at which, in general, the puncture should be made.—*Archives Générales*, December, 1871.

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52. *Scroto-Plastic Operation.*—Dr. J. FULTON, Professor of Physiology, Trinity College, Toronto, relates (*Canada Lancet*, Nov. 1871) an interesting case of this. The subject of it was a man who, while standing astride the tumbling-rod, at its connection near the cylinder, of a threshing-machine, for the purpose of oiling some part of the gearing, had his pantaloons and shirt entangled in the bolts, by which he was drawn down to the rod. "Realizing his dangerous position, he placed his hands on the rod and with a powerful bound freed himself from his entanglement, at the same time stripping himself of every article of clothing. At first he was scarcely aware of having received any injury; but the hemorrhage attracted his attention, and on examination it was discovered that the scrotum was entirely removed, and the integument of the penis torn from the root and reflected forward over the glans. This was replaced by the bystanders, and he was taken up and conveyed home. The hemorrhage was not great, and very little constitutional shock was occasioned by the injury. Upon examination, I found the whole of the perineal region stripped of integument, the scrotum entirely removed, and with it the left tes-

ticle, the cord of which was torn from its connection within the body. The right testicle and cord were laid bare, but otherwise uninjured. No serious damage was done to the urethra, and I was able to pass the catheter into the bladder, and remove a small quantity of urine. The remaining testicle being entirely free from any organic lesion, I felt it my duty not only to try and save it, but also to provide it with a suitable covering. True, it might have healed over, forming for itself a kind of integument, but this I felt would be a tedious process and would not form a very good covering when done, and therefore I decided at once to utilize a portion of the integument from the upper and inner surface of the corresponding (right) thigh.

"The patient was put under the influence of chloroform and ether, and, assisted by Dr. McLachlin, of Fingal, I proceeded to fashion a new scrotum for the *forlorn* testicle. I commenced the incision at the upper and inner part of the thigh, at the anterior part of the perineal region, and carried it downwards to the extent of six or seven inches, then outwards and upwards towards Poupart's ligament, an inch and a half external, to the situation of the cord. I then dissected up this portion of integument, which was oval in shape, from six to seven inches long, and from four to five inches wide, taking care not to wound the saphena vein. The flap so formed was next brought over the anterior surface of the testicle, made to surround it, and the edges stitched posteriorly throughout the whole length. A small quantity of adipose tissue was dissected up with the integument, and did good service in preventing any sloughing of the flap. The newly-formed scrotum was connected, as will be seen, by a neck an inch and a half in width, which was sufficient to insure the vitality of the flap, and was sufficiently large to embrace the testicle comfortably. A small portion of integument was also removed from the left thigh, and brought across the perineal region, in order to facilitate the formation of integument in that part.

"This might be considered almost a case of transplantation, although that subject had not as yet been discussed, much less put into practice. The wound in the thigh was partly brought together with adhesive plaster, and the patient put quietly to bed, and opium ordered to be given to allay the pain and procure rest. The stitches were removed on the third day, when adhesion was found to be tolerably complete. The patient made an excellent and rapid recovery. In three weeks' time he was able to move about the house, and in five weeks was able to attend to ordinary business."

53. *Wound of the Liver by a Ball.*—M. Verneuil communicated to the Surgical Society, Oct. 18, 1871, the case of a young man in whom a ball from a revolver had passed entirely through the liver. When admitted into hospital, M. V. found in the left hypochondriac region an enormous tumour, 5 centimetres in extent, formed by the accumulation of blood under the integuments. The ball had penetrated between the eleventh and twelfth ribs on the left side, and passed to the corresponding place on the opposite side, where it had raised up the skin without perforating it. The ball in its course had evidently traversed the liver in its greatest diameter. An examination of the chest and of the abdomen showed that there was no effusion in these cavities or peritonitis. The patient had only for a few days slight icterus and some derangement of his digestive organs, which rapidly disappeared. The ball remains in the tissues. There was no suppuration either at the point of entrance or in the track of the ball, nor was there any vomiting, diarrhœa, or fever. The patient has been discharged from the hospital.

Clinical experience proves, says M. V., that wounds of the parenchyma of the liver are not so serious as might at first be supposed.—*L'Union Médicale*, Nov. 23, 1871.

54. *Extirpation of Kidney.*—In the *Würtem. Med. Corresp.-Bl.*, 1871, No. 14, Dr. Linser relates the case of a man who received a gunshot wound, Dec. 2, 1870. The ball entered on the left side, immediately below the twelfth rib, in a line drawn from the axilla, and passed out about an inch to the right of the spinal process of the second lumbar vertebra. Hæmaturia occurred

immediately after the receipt of the wound, and continued for twenty-four hours. On the 8th of December the patient was received into the Reserve Hospital at Kirchheim. Out of both wounds, and, somewhat later, from the centre of the fistulous canal which marked the track of the ball, there was a constant discharge of a corrupt urinous fluid, highly albuminous. Hence it was evident that the urine discharged from the wounds, as above, came directly from a wound in one or other of the kidneys. It could not have come from the bladder, as it has been shown that, so long as the kidneys remain in their normal condition, the urine from the bladder contains very little albumen. It was very evident, from all the circumstances of the case, that it was the left kidney that had been wounded by the ball. It was decided that the extirpation of the injured kidney was the only means of promptly securing the patient from an exhausting disease. The operation was performed by Prof. VON BRUNS, March 23. By a perpendicular incision reaching from the crest of the ilium to the twelfth rib, at the outer edge of the sacro-lumbar muscle, the cavity of the abdomen was laid open. The kidney, from an accumulation of urine of an abnormal appearance, was distended into a large sac-like body, requiring the enlargement of the incision by the excision of a rib. The wounded kidney was so firmly bound down at its under surface that it could not be drawn out. After, therefore, applying a ligature around the renal vessels, the convex portion of the kidney was removed by the knife, and the remainder of the organ left in the wound. The loss of blood from the operation was inconsiderable. Ten hours after the operation death took place. On a post-mortem examination it was found that the right kidney was in a diseased condition, its cortical portion being studded with a large number of small abscesses.—*Centralblatt f. d. Med. Wissenschaften*, No. 32, 1871.

D. F. C.

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55. *A New Method of Securing the Vessels of the Pedicle in Ovariotomy.*—Dr. P. J. HAYES introduces to the notice of the profession a method, he calls "sub-peritoneal," for securing the vessels of the pedicle after the removal of an ovarian tumour. He is of opinion "it will prove useful, especially where the pedicle is short. The proceeding closely resembles that known as the subcutaneous ligature of nævus, and consists in first compressing the pedicle between the blades of a clamp or long forceps, then passing a needle armed with a stout catgut ligature beneath a good thickness of the serous surface of the pedicle, but superficial to the principal vessels; the needle being withdrawn at the side opposite to the point of entrance, is again passed into the aperture of exit, and pushed between the vessels and peritoneal covering, on the side of the vessels opposite its first passage, until it can be withdrawn through the opening made by its first entrance; then the ends of the catgut ligature are to be strongly tied, and cut off short, so as to prevent the possibility of hemorrhage from the included vessels, yet, owing to the bulk of unligatured substance superficial to the catgut, there will be no sloughing of the end of the pedicle, its vitality can be maintained, and even adhesions will probably connect it with some adjacent portion of the peritoneal surface, whilst in time the catgut, inclosed by living tissue, may become absorbed. Although bleeding from the chief vessels can be prevented in the manner described, yet it is quite possible that oozing may take place from the divided orifices of small circumferential vessels. In such a case the actual cautery applied to the cut surface will afford ample security against recurrence of bleeding.

"Should the pedicle be sufficiently long to permit of its being secured between the edges of the abdominal wound by means of an electro-gilt transfixing pin, the ends of the catgut (or other) ligature, instead of being cut off short, might be passed through the eye of the needle, and carried parallel to the vessels through the centre of the pedicle, so as to emerge at the cut surface, from which they could be withdrawn after the lapse of seven or eight days."—*Dublin Quart. Journ. Med. Sci.*, Nov. 1871.

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56. *A Fourth Series of One Hundred Cases of Ovariotomy.*—Mr. T. SPENCER WELLS communicated to the Royal Med. Chirurgical Society (June 13) "A Fourth Series of One Hundred Cases of Ovariotomy," with remarks on the

diagnosis of uterine from ovarian tumours. Following the order of former papers, the author has arranged this fourth series of 100 cases in tables of three series. Series 1. Cases in which ovariotomy was completed—100 cases: 78 recoveries, 22 deaths. Series 2. Cases in which ovariotomy was commenced, but not completed—6 cases: 2 relieved or cured, 4 died. Series 3. Cases where an exploratory incision was made—7 cases: 5 recovered from incision, 2 died. He shows that the mortality after ovariotomy is steadily diminishing. Of his first 100 cases, 34 died; of his second 100 cases, 28 died; of his third 100 cases, 23 died; and of his fourth 100, 22 died. In this fourth series, forty-four have been in hospital and fifty-six in private practice. In private practice the mortality was only 14 per cent., while in hospital it was 31 per cent. The author believes that the mortality in private practice may be taken as a guide to what may become the general average mortality after ovariotomy, and he is convinced that it may be reduced to about 10 per cent., without excluding those extreme cases where the operation is performed as a forlorn hope. The author then proves that large tumours of the non-gravid uterus have been frequently mistaken for ovarian tumours; and he points out how they may be distinguished from each other. He shows that there is nothing in the *history* of a doubtful case which affords any very decisive assistance, and then examines in detail the signs afforded by inspection and measurement of the abdomen, by palpation, and by percussion and auscultation, which are of value in diagnosis. He then describes the conditions to be observed in examination by the vagina and rectum—alone or combined—and in conjunction with examination by the abdominal wall, deferring to a future opportunity any account of the results obtained by exploratory puncture or incision.—*Med. Times and Gazette*, June 24, 1871.

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57. *Wound of the Intestine during Ovariotomy, with Recovery.*—Dr. CHRISTOPHER HEATH communicated to the Clinical Society (Nov. 10, 1871) a case of this. The patient was under his care in the Hospital for Women, in November, 1870, suffering from an ovarian tumour, which had been repeatedly tapped, and for the removal of which an attempted ovariotomy had been undertaken by another surgeon a year before. The patient was worn out with pain and sickness, and was anxious that another attempt at ovariotomy should be made. This was undertaken by Mr. Heath on November 25, 1870, when very extensive adhesions to the surrounding structures were found. On enlarging the abdominal incision with scissors in the ordinary way, an empty coil of small intestine, which was closely adherent to the wall, was divided in three-quarters of its circumference. The removal of the cyst was accomplished with considerable difficulty, the pedicle being tied and dropped. Mr. Heath then attached the bowel to the skin with silk sutures, forming an artificial anus, and closed the abdominal incision with wire sutures. The patient made a perfectly good recovery, feces and flatus passing by the artificial opening on the second day, and solid motions per anum. The silk sutures were removed on the eleventh day, and the patient was moving about at the end of a month. Three applications of the actual cautery were made to the edges of the fistula to contract it, but it did not close, and the patient left the hospital in April, 1871. She was presented to the Society in a very comfortable and healthy condition, the use of a belt and air-pad satisfactorily retaining all fecal matter, and the patient having regular stools.—*Med. Times and Gaz.*, Nov. 25, 1871.

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58. *Polypus of Rectum in Children.*—Since 1856, when Dr. BÓKAI first called attention to the polypus of the rectum in children, he has observed twenty-five cases. The tumour varied in the different cases, in size, consistence, form, and colour. The stalk or stem by which the polypus was attached to the intestine was also of different lengths and thickness. The leading symptoms indicative of the presence of the tumour, frequent ineffectual calls to stool; often a slight discharge per anum of blood and slime; actual hemorrhage is of seldom occurrence; the most distinctive symptom is the projection of the polypus from the anus, usually after a stool. It is always difficult, often impossible, to detect the presence of the polypus within the rectum. It may be brought into sight,

however, by the administration of a clyster, or, by the child, if old enough, pressing down as at stool. Polypus of rectum is distinguished from dysentery chiefly by the absence of tenesmus and fever; from prolapsus ani by the ring-shaped, rose-like, or longish cylindrical form and painful character of the prolapsed portion, its augmentation in size by the tenesmus it gives rise to; the edges finally spreading sidewise, and presenting, usually, in the centre or on one side the opening into the rectum. The seat of the polypus is usually between the inner and outer sphincters, and inserted at the posterior wall of the intestine. The prognosis is always favourable. The removal of the polypus is by the application of a ligature, and subsequently the tearing away, or not, of the tumour. The latter may be held firmly during the operation, by a forceps, or by what Dr. B. prefers, a finely constructed clamp, as suggested by Serres.—*Centralblatt f. d. Med. Wissenschaften*, from *Jahrb. f. Kinderheilk.*, N. F. IV. 1871. D. F. C.

OPHTHALMOLOGY.

59. *Colour Blindness from Diseases of the Eye.*—In *The Royal London Ophthalmic Hospital Reports* for Nov. 1871, we find an account of the researches of Dr. X. GALEZOWSKI, as to the effects of diseases of the eye on the perception of colours, taken from the *Annales D'Oculistique* for May and June, 1871.

The result of his examination of 766 patients suffering from alterations in the fundus oculi has been to establish three varieties of chromatic defect: A. Morbid "Contrast of Colours." B. Colour Blindness. C. Scotomata for Colours. A. The name "contrast" of colours has been given to the mutual opposition between different colours when seen together, or when seen successively, by which a mixed tint (complementary colour) is produced unlike either of those looked at. This physiological phenomenon is met with, under exceptional circumstances, in healthy eyes, but analogous phenomena result from the morbid conditions brought about by the abuse of alcohol. The impression produced on the retina by one colour remains too long, so that another cannot be seen properly till a considerable interval has elapsed. After the patient has shut his eyes for a while he can tell any colour well. If such a patient be told to look at several colours at once, he will see nothing but confusion, though he will be able to recognize any one separately. B. Colour blindness. 1. In optic atrophy. This is the disease in which colour blindness is most frequently met with. Of 156 patients with optic atrophy, 66 were unable to detect one or many colours, or even any at all.

Green is the first colour which fails to be recognized, and afterwards red. Nearly all patients suffering from progressive atrophy take the green for gray, and as the malady advances, the red becomes less and less perceptible, changing into brown, and then into black. Blue is perceived for a very long time, and yellow is detected almost as long as the patient can see light. As the yellow occupies so large a part of the solar spectrum, it may also have a larger surface than the other colours in the retinal cones, so that, though they are atrophied, they still perceive the yellow. The author has only met with total colour blindness in two cases. The atrophy, consecutive to neuritis or neuritis itself, more rarely gives rise to colour blindness. Alcoholic amblyopia may produce complete colour blindness, or only for a certain colour, and the blindness varies from day to day; green is generally confounded with gray. Glaucoma gives rise to colour blindness only exceptionally. 2. Hysterical amblyopia. Cases of this affection are given, and an account of the effect on perception of colours. One fact noted is, that in all the cases, besides the loss of perception of yellow and blue, all the others cease to be seen; often, even, the patients cannot tell black and white. 3. Optic neuritis, hemiopia, and different varieties of cerebral amblyopia. These are generally exempt. The loss of the faculty of distinguishing yellow indicates most frequently a syphilitic